



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,014	08/24/2001	Mark Henrik Sandstrom		1123
7590	04/05/2006		EXAMINER	
Mark Henrik Sandstrom			MOORE JR, MICHAEL J	
Apt 2604			ART UNIT	PAPER NUMBER
700 -9 St SW				2616
Calgary, AB T2P 2B5				
CANADA				

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/938,014	SANDSTROM, MARK HENRIK	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael J. Moore, Jr.	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 18 January 2006.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-8 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-8 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 24 August 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date: _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Objections***

Amendments made by Applicant to overcome the claim objections presented in the previous Office Action are proper and have been entered. These objections have been withdrawn.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 3-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Graves et al. (U.S. 6,741,572) ("Graves"). Graves teaches all of the limitations of the specified claims with the reasoning that follows.

Regarding claim 1, "a network system for interconnecting a set of packet-switching network elements" is anticipated by agile lambda network 100 (network system) of Figure 4 that interconnects routers 40 and 40' (packet-switching network elements).

"The network system comprising a set of nodes, each node configured to interface with one of the packet-switching network elements and providing a connection of variable capacity to the other nodes of the network system" is anticipated by agile

lambda switches 30A-E (nodes) of Figure 4 that interface with each other as well as routers 40 and 40' via the wavelength channels (connections) shown in Figures 4 and 5.

"Each one of the connections configured to transport data from its source node to its destination node and having an associated capacity and traffic load" is anticipated by the wavelength channels shown in Figures 4 and 5 that receive incoming traffic (load) and operate at OC-48 or OC-192 line rates (capacity) as spoken of on column 10, lines 54-66.

Lastly, "the capacity of each connection controlled from its destination node based at least in part on the traffic loads associated with the connections configured to transport data to that destination node" is anticipated by router 40 (destination node) that accumulates traffic data (associated traffic load) and processes this data to determine whether, when, and where additional transmission capacity should be allocated as spoken of on column 11, lines 39-50.

Regarding claim 3, "wherein the traffic loads and the capacities associated with the connections between the set of nodes are dynamic variables" is anticipated by the accumulated traffic data (load) and the additional transmission capacity allocation spoken of on column 11, lines 39-50.

Regarding claim 4, "where the capacities of the connections are cyclically optimized with a cycle time that is constant during regular system operation" is anticipated by the monitoring of the buffer fill and buffer rate-of-fill values by router 40 and subsequent allocation of needed additional transmission capacity as spoken of on column 11, lines 39-50.

Regarding claim 5, "wherein a number, up to all, of the nodes are physically located at a single physical platform or are attached to a single chassis" is anticipated by agile lambda switch 30C shown in Figure 5.

Regarding claim 6, "wherein one or more of the nodes are integrated into their associated packet-switching network elements" is anticipated by agile lambda switch 30C coupled to router 40 as shown in Figure 5.

Regarding claim 7, "wherein the system is at least in part a sub-network of a multi-use or public network, with additional network elements, which do not actively participate in the operation of the thus created sub-network, in pass-through mode either in between the nodes or in between the packet-switching network elements and the nodes of the sub-network" is anticipated by agile lambda network 100 (network system) of Figure 4 coupled to user terminals (additional network elements) shown in Figure 4.

Regarding claim 8, "wherein one or more of the packet-switching network elements comprises a network system as defined in claim 1" is anticipated by router 40 of Figure 4 coupled to agile lambda switches 30A-E.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graves et al. (U.S. 6,741,572) ("Graves") in view of Dai et al. (U.S. 6,246,692) ("Dai").

Regarding claim 2, Graves teaches the network system of claim 1. Graves does not teach where the network system is configured to set the capacity of a connection to zero when the connection has no traffic load associated therewith.

However, *Dai* teaches a packet switching fabric 10 coupled to a plurality of network nodes via links 15, where after a last burst of packet data in a channel is read out (no remaining load), the channel bandwidth (capacity) for that particular channel is released.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the bandwidth teachings of *Dai* with the system of *Graves* in order to release bandwidth from unneeded connections for reallocation to connections needing additional capacity.

#### ***Response to Arguments***

5. Applicant's arguments with respect to amended claims 1-8 have been considered but are moot in view of the new ground(s) of rejection provided above.

#### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nomura (U.S. 6,973,504) and Tang (U.S. 6,195,332) are other references considered pertinent to this application.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (8:00am - 4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached at (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael J. Moore, Jr.  
Examiner  
Art Unit 2616

mjm MM

*Seema S. Rao*  
SEEMA S. RAO 4/3/06  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600